

REMARKS

Applicants respectfully request reconsideration of this application as amended. Claims 1, 3, 4, 6, 8, 13, 14, 15, 18, and 20 have been amended, and claims 5 and 19 have been cancelled. No claims have been added. Therefore, claims 1-4, 6-18, and 20-21 are present for examination.

Oath/Declaration

The Examiner indicated that the Oath/Declaration for inventor Kenneth C. Creta is missing. Although the originally filed application listed Kenneth C. Creta as an inventor, Kenneth C. Creta was inadvertently omitted as an inventor in the subsequently submitted Declaration.

A Request To Correct Inventorship to add Kenneth C. Creta as an inventor, and documents to support the request accompany this response. The Applicants hereby request that the Request To Correct Inventorship be approved and entered.

Drawings

The Examiner has rejected to the drawings for failing to comply with 37 C.F.R. 1.84(p)(5). Specifically, the Examiner has indicated that they do not include the following reference signs mentioned in the description: (100) and (250). The

Examiner has required drawing corrections in reply to the office action to avoid abandonment.

A Letter to the Official Draftsperson, and amended FIG. 1 and FIG. 2 (redlined and clean, corrected versions) accompany this Response. The requested changes have been made in the attached versions of FIG. 1 and FIG. 2. Specifically, FIG. 1 has been amended to show reference numeral 100, and FIG. 2 has been amended to show reference numeral 250. Furthermore, FIG. 2 has been amended to show reference numeral 291 to conform FIG. 2 to the originally filed specification. Applicants hereby request that these clean copies of FIG. 1 and FIG. 2 be substituted for the originally filed versions of these figures presently in the subject application.

No new matter has been added by these amendments, and the amendments are fully supported by the originally filed specification.

35 U.S.C. §102 Rejection Hamaguchi

The Examiner has rejected claims 1-14 under 35 U.S.C. §102(b) as being anticipated by Hamaguchi et al., U.S. Patent No. 5,737,568 ("Hamaguchi"). Claim 5 has been cancelled. For at least the reasons discussed below, claims 1-4, and 6-14 are not anticipated by Hamaguchi.

Hamaguchi discloses a multiprocessor system having a shared memory that contains the state of the data for every entry in each cache memory possessed by

each processor. In one embodiment, “when a writing operation hits a cache memory, updating of data is performed only on the cache memory, and a writing operation of data in a main storage is performed when the entry is expelled from the cache memory or when a cache miss is produced by another processor.” In another embodiment, a write-through method is illustrated “wherein a writing operation by any processor is simultaneously reflected also in a main storage.” (See Hamaguchi, Abstract, and column 6, lines 13-22.)

Each of claims 1-4 and 6-14 requires receiving a request to read a modified cache line at a responding node of a shared memory multiprocessor architecture from a requesting node of the shared memory multiprocessor architecture. Furthermore, each of claims 1-4 and 6-14 requires responding to the request by updating a memory at a home node with data read from the modified cache line, and by providing an answer to the requesting node.

Hamaguchi does not disclose each and every element of claims 1-4 and 6-14. First, Hamaguchi does not disclose receiving a request to read a modified cache line. Furthermore, Hamaguchi does not disclose receiving such request at a responding node from a requesting node. Hamaguchi also does not disclose responding to the request to read a modified cache line by updating a memory at a home node with data read from the modified cache line, and by providing an answer to the requesting node. Rather, in Hamaguchi, main memory is updated in response to a write operation, rather than a read request as required by the claimed invention.

For at least the reasons discussed above, Hamaguchi does not anticipate claims 1-4 and 6-14 of the Applicants' invention. As such, the Applicants respectfully request that claims 1-4 and 6-14 be allowed as amended.

35 U.S.C. §103 Rejections

According to MPEP §2143:

"To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

1. Hamaguchi in view of Flynn

The Examiner has rejected claims 9-11 under 35 U.S.C. § 103(a) as being unpatentable over Hamaguchi in view of Flynn et al., U.S. Patent No. 5,222,224

("Flynn"). For at least the reasons discussed below, Applicants submit that claims 9-11 are not made obvious by the combination of Hamaguchi and Flynn.

Flynn discloses a method to insure data consistency between a plurality of individual processor cache memories and the main memory in a multi-processor computer system.

Since claims 9-11 depend from claim 8, and since neither Hamaguchi nor Flynn discloses, teaches, or suggests the elements of claim 8, individually or in combination, it is axiomatic that neither Hamaguchi, nor Flynn, nor their combination disclose, teach, or suggest the respective combination of elements of claims 9-11. As discussed above, Hamaguchi does not disclose receiving a request to read a modified cache line, and further does not disclose receiving such request at a responding node from a requesting node. Hamaguchi also does not disclose responding to the request to read a modified cache line by updating a memory at a home node with data read from the modified cache line, and by providing an answer to the requesting node. Flynn also fails to disclose, teach, or suggest these features of the claimed invention. See, e.g., claims 1, 8, 12, and 15, as amended. Thus, no combination of Hamaguchi and Flynn can be said to disclose, teach, or suggest the claimed invention.

It is respectfully submitted that the Examiner has failed to establish prima facie that claims 9-11 are obvious in view of Hamaguchi and Flynn. Thus, it is respectfully submitted that the Examiner's rejection of these claims under 35 U.S.C. §103 as obvious in view of Hamaguchi and Flynn should be withdrawn.

2. Hamaguchi

The Examiner has rejected claims 15-21 under 35 U.S.C. § 103(a) as being unpatentable over Hamaguchi. Claim 19 has been cancelled. For at least the reasons discussed below, claims 15-18 and 20-21 are not made obvious by Hamaguchi.

Hamaguchi does not disclose, teach, or suggest the elements of claims 15-18 and 20-21. As discussed above, Hamaguchi does not disclose receiving a request to read a modified cache line, and further does not disclose receiving such request at a responding node from a requesting node. Hamaguchi also does not disclose responding to the request to read a modified cache line by updating a memory at a home node with data read from the modified cache line, and by providing an answer to the requesting node. See, e.g., claims 1, 8, 12, and 15, as amended. Thus, Hamaguchi fails to disclose, teach, or suggest the claimed invention.

It is respectfully submitted that the Examiner has failed to establish prima facie that claims 15-18 and 20-21 are obvious in view of Hamaguchi. Thus, it is respectfully submitted that the Examiner's rejection of these claims under 35 U.S.C. §103 as obvious in view of Hamaguchi should be withdrawn.

Conclusion

Applicants respectfully submit that all of the Examiner's rejections have been overcome, and that the claims, as amended, are in condition for allowance.

Accordingly, Applicants respectfully request the rejections be withdrawn and the

claims as amended be allowed.

The Examiner is requested to initiate an interview with the undersigned by calling 949-498-0601 if the Examiner believes that such an interview will advance prosecution of this application.

Request for an Extension of Time

The Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 50-0221 to cover any necessary fee for such an extension.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 50-0221.

Respectfully submitted,

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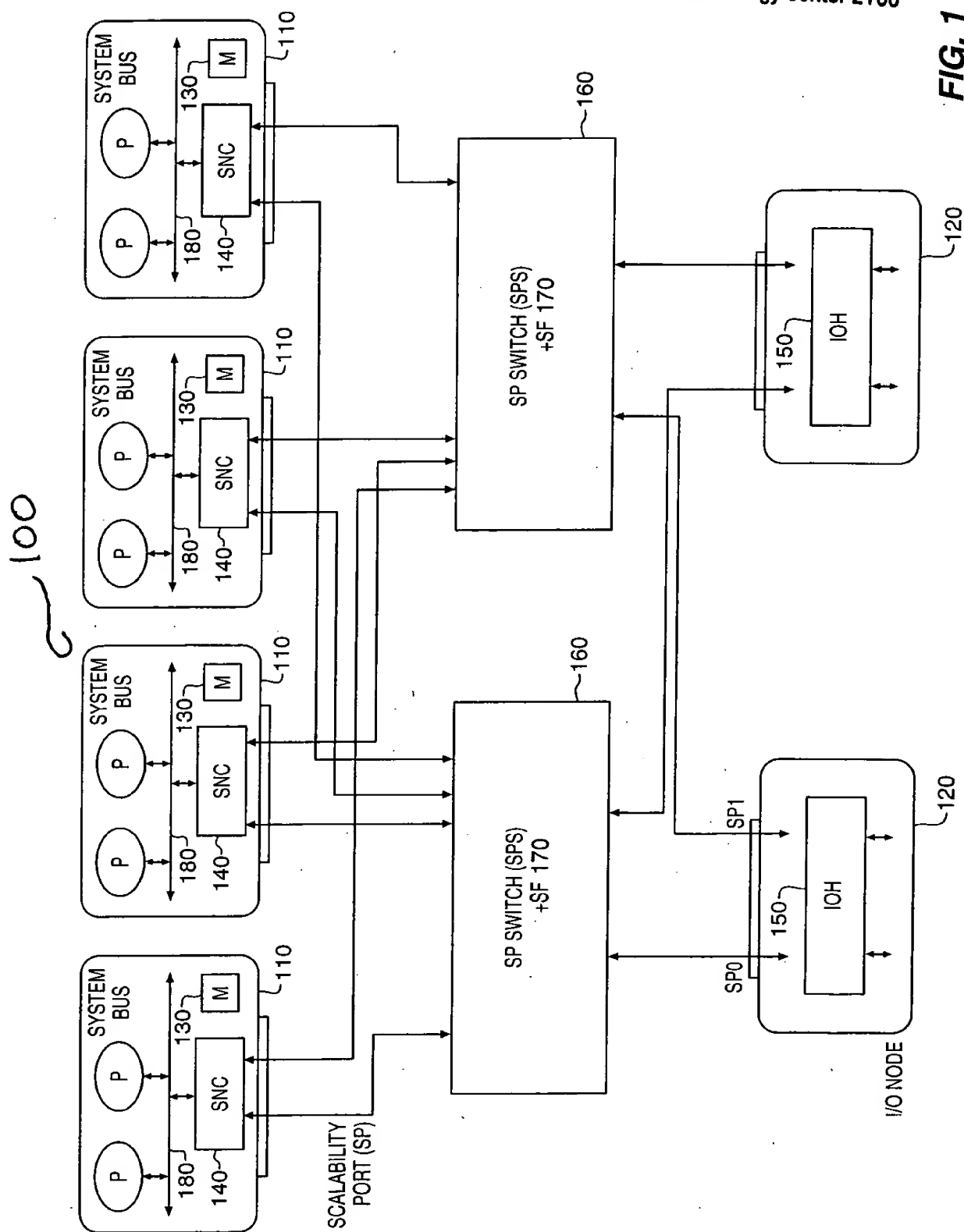


FIG. 1

FIG. 2

